

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/DE2004/001382

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 E21B7/00 E21B7/14

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)  
IPC 7 E21B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 885 591 A (PAGE RONALD D) 5 December 1989 (1989-12-05) column 3, line 42 - column 4, line 9; figure 1	1-11
A	CA 959 280 A (LEWES DAVID) 17 December 1974 (1974-12-17) the whole document	1-11
A	FR 1 588 454 A (GILLET, F.) 17 April 1970 (1970-04-17) the whole document	1-11
-/--		

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

### \* Special categories of cited documents :

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

\*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

\*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

\*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

\*G\* document member of the same patent family

Date of the actual completion of the international search

12 January 2005

Date of mailing of the international search report

24/01/2005

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Bellingacci, F

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/DE2004/001382

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>PIERSON, C.B.: "Experimental Study of a Recirculating Water Ice Drill"</p> <p>IEEE, 'Online! 1980, XP002313188</p> <p>Retrieved from the Internet:</p> <p>URL:<a href="http://intl.ieeexplore.ieee.org/iel6/8271/25888/01151408.pdf?isNumber=25888&amp;arnumber=1151408&amp;prod=CNF&amp;arSt=+108&amp;ared=+113&amp;arAuthor=+Pierson%2C+C.&gt;">http://intl.ieeexplore.ieee.org/iel6/8271/25888/01151408.pdf?isNumber=25888&amp;arnumber=1151408&amp;prod=CNF&amp;arSt=+108&amp;ared=+113&amp;arAuthor=+Pierson%2C+C.&gt;</a></p> <p>'retrieved on 2005-01-07!</p> <p>the whole document</p> <p style="text-align: center;">-----</p>	1

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/DE2004/001382

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
US 4885591	A	05-12-1989	CA	1246723 A1		13-12-1988
CA 959280	A	17-12-1974	CA	959280 A1		17-12-1974
FR 1588454	A	17-04-1970	NONE			

Post Available Copy





# INTERNATIONALER RECHERCHENBERICHT

Angaben zu Veröffentlichungen, die zur selben Patentfamilie gehören

Internationales Aktenzeichen

PCT/DE2004/001382

Im Recherchenbericht angeführtes Patentedokument		Datum der Veröffentlichung	Mitglied(er) der Patentfamilie		Datum der Veröffentlichung
US 4885591	A	05-12-1989	CA	1246723 A1	13-12-1988
CA 959280	A	17-12-1974	CA	959280 A1	17-12-1974
FR 1588454	A	17-04-1970	KEINE		